Let's build the skills!
Lille 2018 LIBER
Wed 4th of July, 9-12 am – Room C

Facilitating Open Science Training

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FOSTER - The Project (2014 - 2016)

‘Facilitate Open Science Training for European Research’

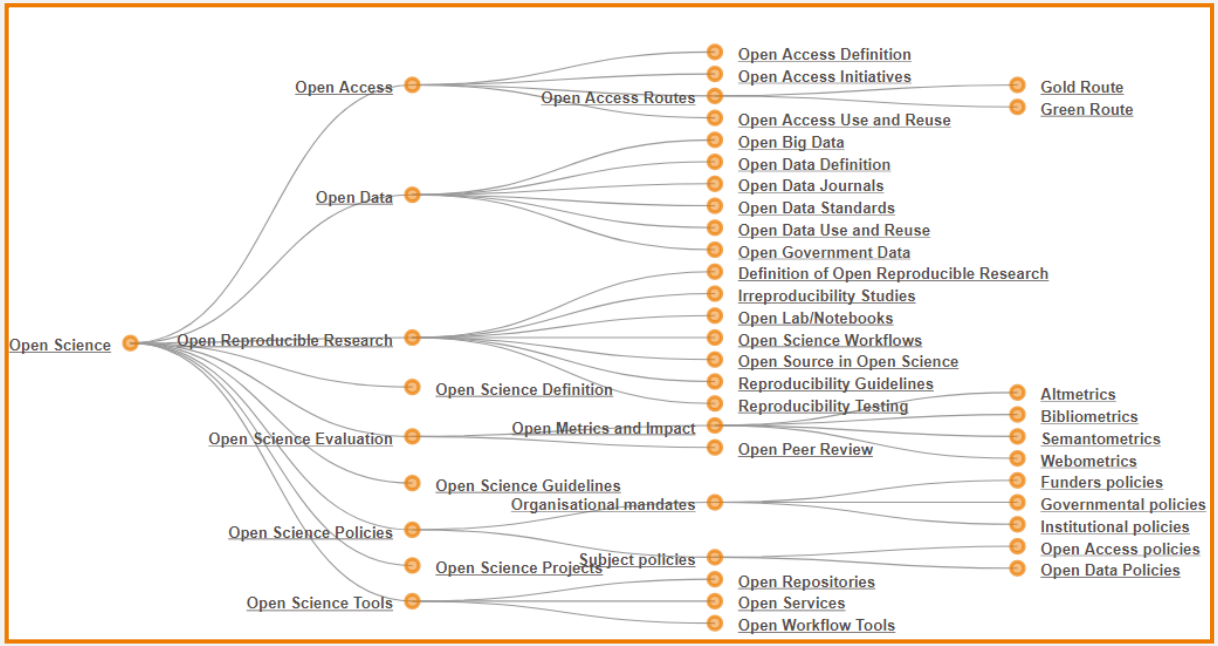
- Raise awareness about Open Science
- Facilitate Open Science training for <6300 participants
  - More than 100 f2f trainings in 28 countries
  - 25 online courses
- Creation of the FOSTER portal

Open Science Taxonomy

Definition

of Open Science

2000+ training materials, categorized in the FOSTER portal according to the taxonomy



Paper available at http://oro.open.ac.uk/44719/. Image available at http://oro.open.ac.uk/47806/

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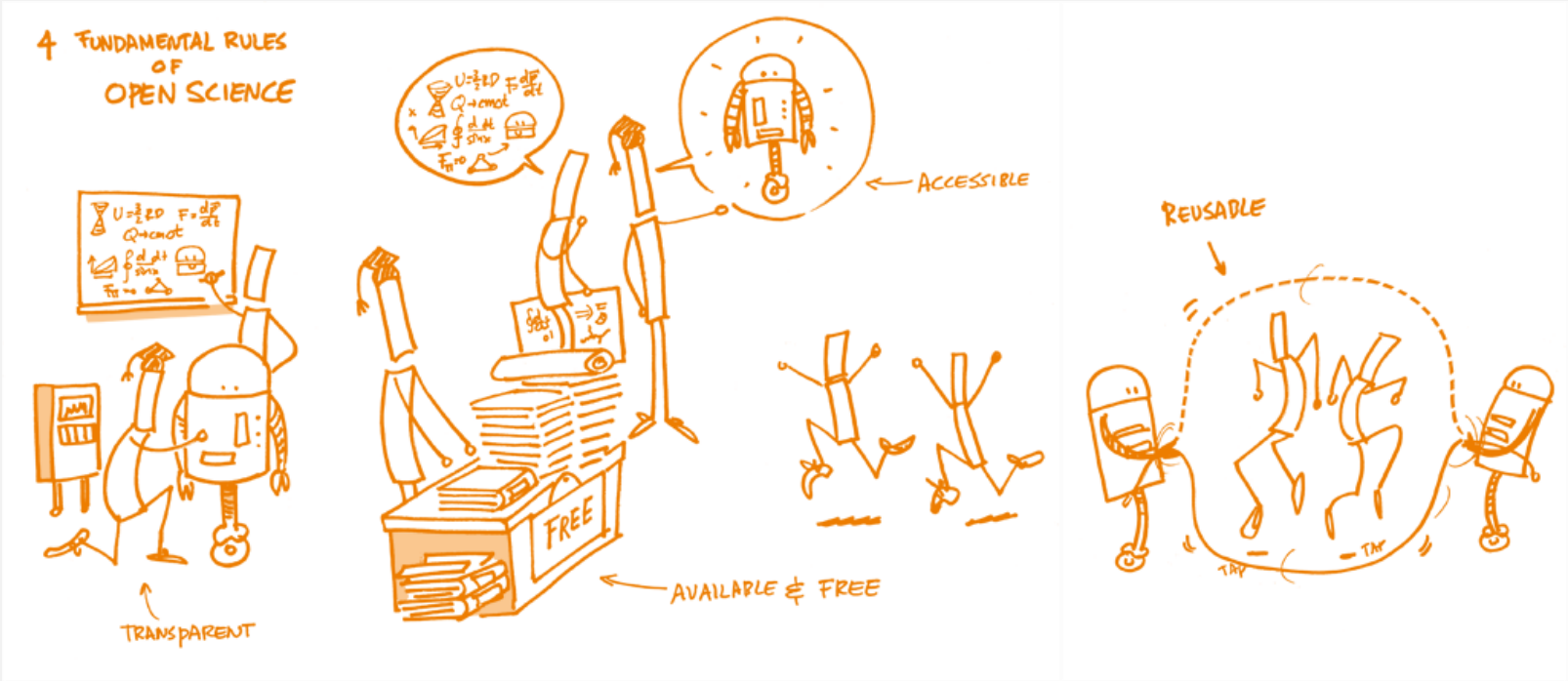
What is Open Science?



Open Science Training Handbook. https://book.fosteropenscience.eu/

What is Open Science?

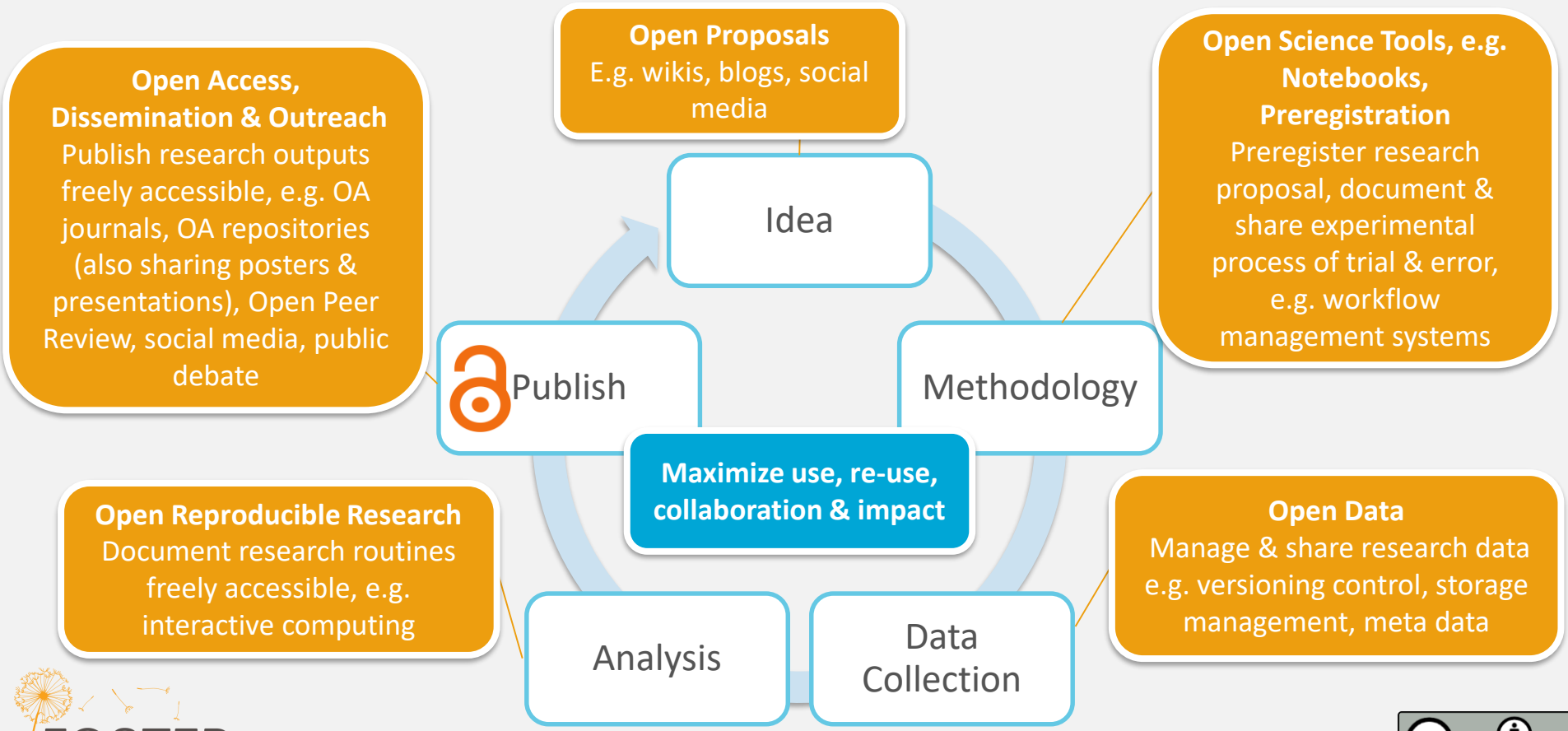
Open Science is the practice of science in such a way that others can collaborate and contribute, where research data, lab notes and other research processes are freely available, under terms that enable reuse, redistribution and reproduction of the research and its underlying data and methods.

[FOSTER, Open Science Definition: https://www.fosteropenscience.eu/foster-taxonomy/open-science-definition]

The movement to make scientific research, data and dissemination accessible to all levels of an inquiring society.

[FOSTER, Open Science Definition https://www.fosteropenscience.eu/taxonomy/term/7]

Opening up the research life cycle



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FOSTER Plus - The Project (2017 – 2019)

‘Fostering the practical implementation of Open Science’

Activities

- Train researchers in Open Science with focus on practical implementation & discipline specific content
  - f2f training & online courses
- Strengthen the training capacity

Open Science training capacity

→ ‘train the trainer’ approach

Open Science

Training Handbook

resource to support Open Science trainer community

& multiplier effect

Open Science

Trainer Bootcamp

3 day workshop for new Open Science trainers

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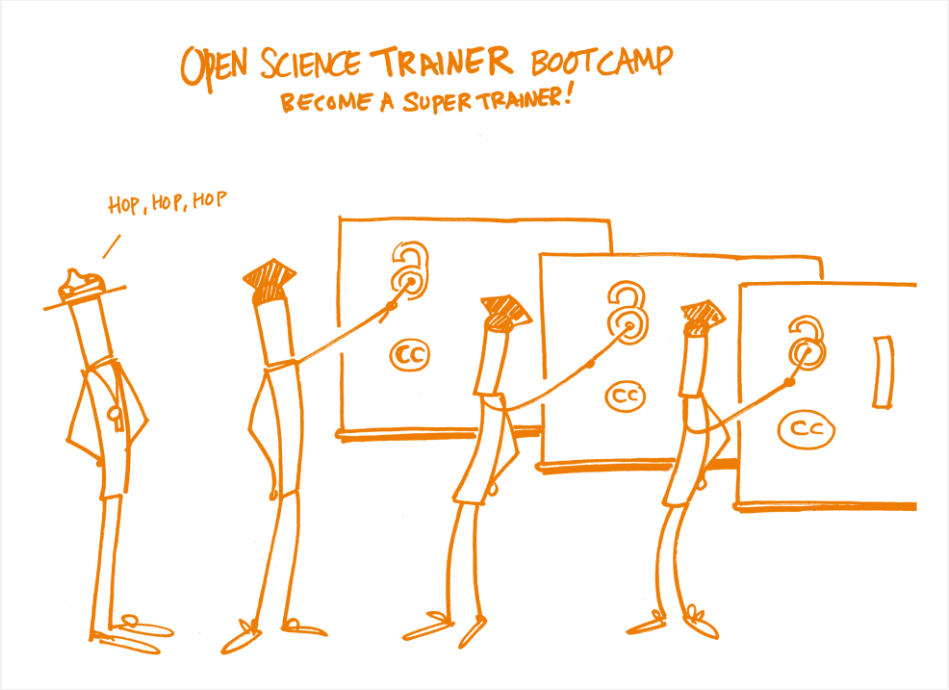
Open Science Trainer Bootcamp



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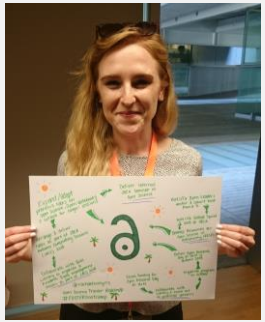
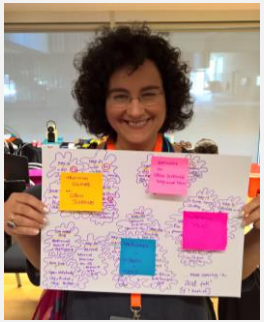
Open Science Trainer Bootcamp

By Elena Giglia





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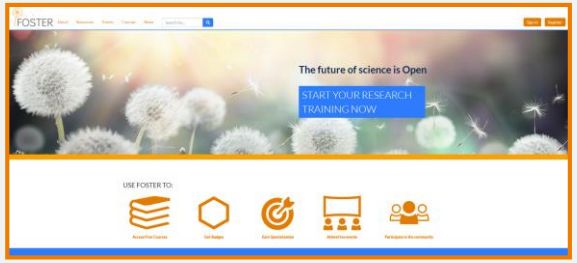
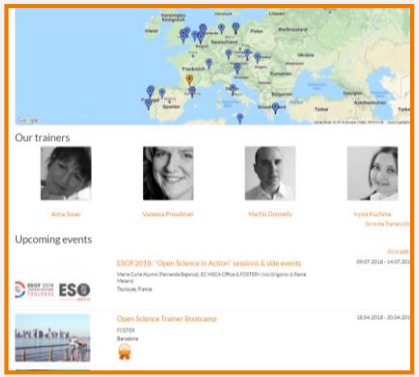
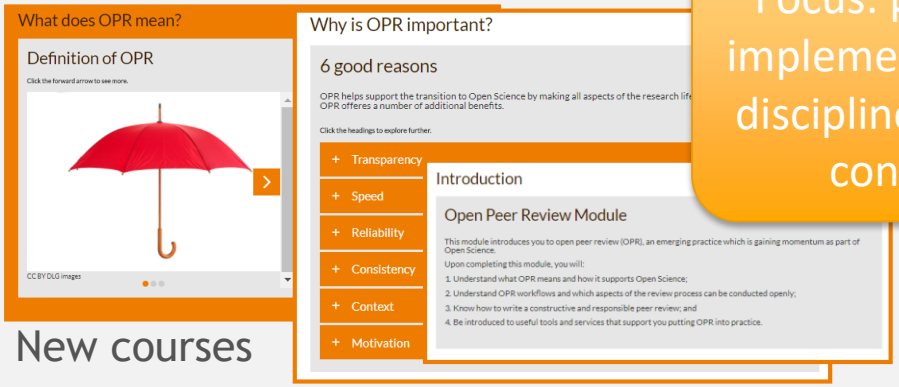
FOSTER Plus resources



www.fosteropenscience.eu

Events calendar &
Trainers directory





Focus: practical implementation & discipline specific content

New courses

www.fosteropenscience.eu/toolkit

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FOSTER learning strategy & tools

Learning Scenarios	Self learning	Moderated learning
Tools	Adapt learning	
	Moodle	Moodle
Badging	✓	✓
Learning paths	✓	✓

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Example Course - Adapt tool

Open Peer Review

This module will introduce you to Open Peer Reviewing and let you kn

What does Open Peer Review (OPR) mean?

Introduction

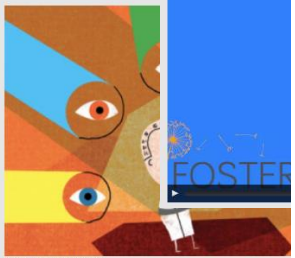
This module introduces y
Science.

Upon completing this mo

- understand what OI
- be aware of OPR wo
- know how to write a
- know about useful t

OPR in three

In this short video, Tony R
strongly needed in the pe



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Discipline specific journals, pre-print servers & OPR initiatives

Many OPR initiative
some discipline-spec
Sciences, and the Ar

For a broader overvi
Learn the Language.

Click

Discipli

+ BioR

+ Oper

+ digita

CC-BY Joe The Goat Farmer

Are you ready for Open Peer Review?

Transparency can be added to peer review through:

Tick all that apply.

- [ ] Accessible evaluation reports
- [ ] Platforms that allow interaction
- [ ] Revealed identities of reviewers

Submit | Show feedback

What are the benefits of open peer review?

Tick all that apply.

- [ ] It is not biased

Additional resources

- OpenUp Toolbox www.openuphub.eu
- Görögh, Edit et al. (2017): Open Up Open Peer Review landscape scan http://openup-h2020.eu/wp-content/uploads/2017/01/OpenUP_D3.1_Peer-review-landscape-report-1.pdf
- Ross-Hellauer, Tony (2016): OpenAIRE Blog entry. Defining OPR https://blogs.openaire.eu/?p=1371; Aspects of OPR https://blogs.openaire.eu/?p=1410
- 10 simple rules for OPR (to be published soon)
- Stafford Noble, William /(2017): Ten simple rules for writing a response to reviewers http://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1005730
- Peer Review Week resources page where you can find How-tos & Tutorials, Best Practices & Guidelines and Research related to peer review. http://www.pre-val.org/prw/
- Masuzzo, Paola; Martens, Lennart (2017): Do you speak open science? Resources and tips to learn the language. https://peerj.com/preprints/2689/
- McKiernan, Erin: Why is open peer review important to me? Presentation UCLA https://s3-eu-west-1.amazonaws.com/pfigshare-u-files/1801875/OpenEd_peerReview.pdf
- Hooper, Mark (2017): History of Journal Peer Review. https://vimeo.com/216091379
- Schmidt, Birgit et al. (2016): Peer Review on the Move from Closed to Open
- Ross-Hellauer, Tony; Schmidt, Birgit; Deppe, Arvid (2017): OpenAIRE Survey on Open Peer Review: Attitudes and experience amongst editors, authors and reviewers
- COPE Guidelines for authors, peer reviewers and editors: https://publicationethics.org/resources/guidelines

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New courses: topics

What is Open Science?

Best Practices

Managing & Sharing Research Data

Licensing

Open Peer Review

Sharing Preprints

Open Access Publishing

OSS & Workflows

Data Protection & Ethics

Open Science & Innovation

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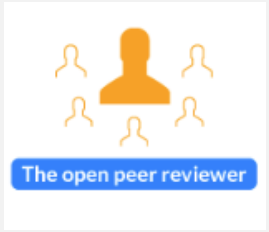
New courses: learning paths & badges

Learning path	Content
The Reproducible Research Practitioner	What is Open Science? Best Practices Open Access Publishing Managing & Sharing Research Data OSS and workflows
The Responsible Data Sharer	What is Open Science? Managing & Sharing Research Data Ethics and Data Protection Licensing
The Open Peer Reviewer	What is Open Science? Open Peer Review Managing & Sharing Research Data OSS and Workflows
The Open Access Author	What is Open Science? Open Access Publishing Managing & Sharing Research Data Licensing
The Open Innovator	What is Open Science? Open Science & Innovation Managing & Sharing Research Data Licensing



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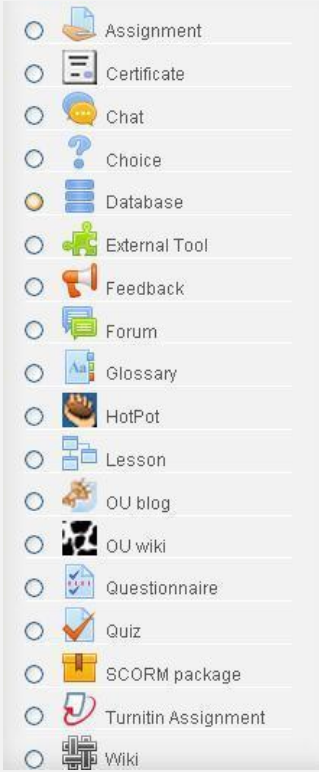
Learning Management System - Moodle

Tailor courses

- Possible course activities:
  - Lessons, assignments, forum, questionnaires, quiz, wiki etc.
  - Include links, documents, videos or SCORM packages, e.g. FOSTER online courses made with Adapt tool



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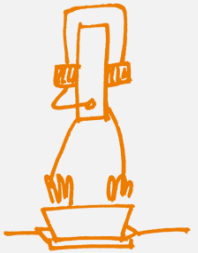
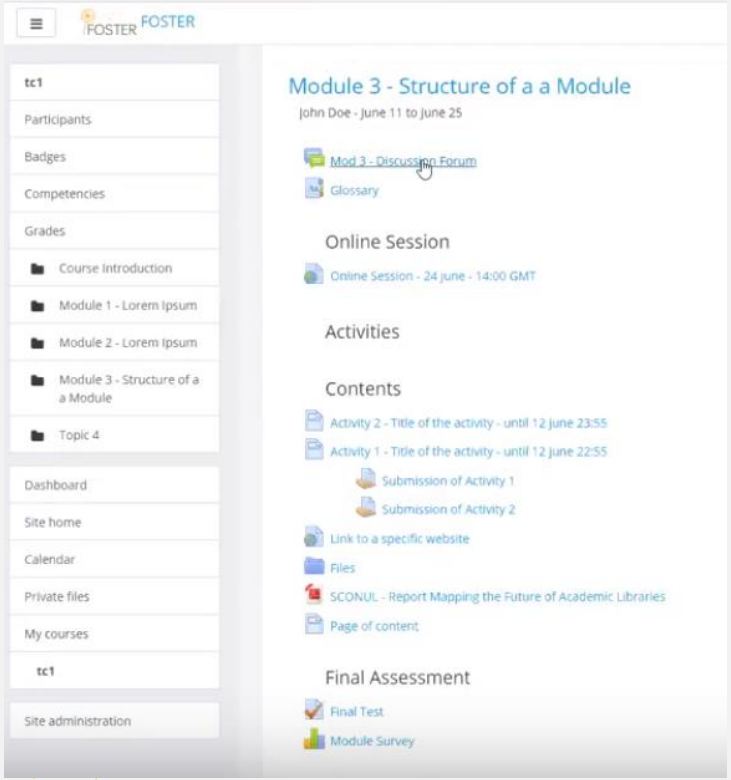
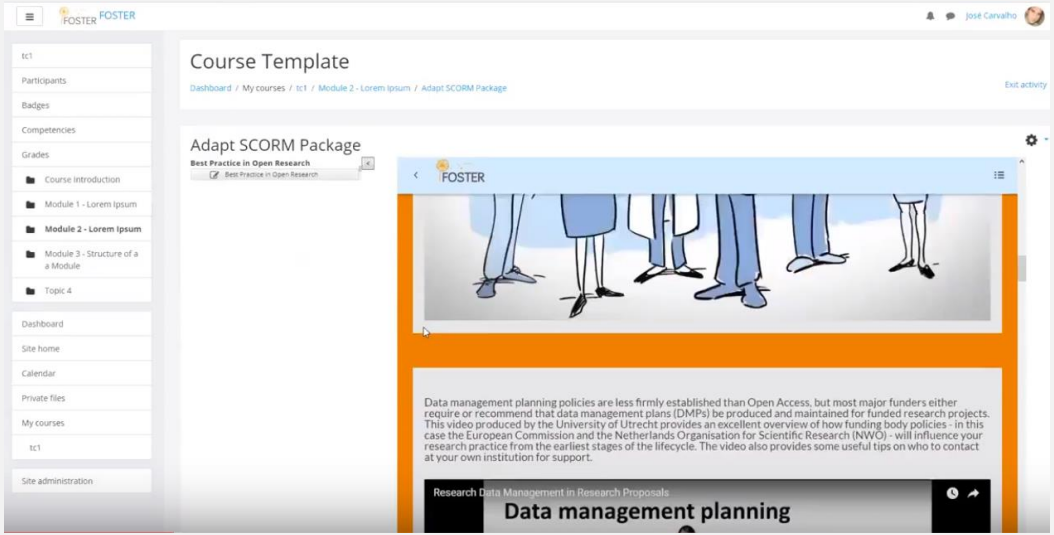
Moodle







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Feedback & discussion

- What is your general knowledge about Open Science topics?
- Have you ever attended a course about these?
- What type of training have you received in your institution?
- Is there a training programme established in your institution (online & f2f)?
- Do you give training yourself?

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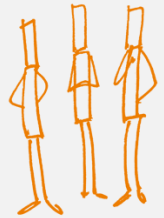
Feedback & discussion



Group 1

Explore the Open Access course & think about how to use it in your context.

What is you interest, what might be opportunities or difficulties?

Group 2

Look at all courses & think about what librarians need.

Draw your training & skills development priorities.

www.fosteropenscience.eu/toolkit

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Your Open Science training ideas

- What is needed in terms of courses?
- Get in touch with FOSTER, send us your plans & will assist you in creating and moderating courses

  - Via feedback form
  - Or via email

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Discover the Open Science Training Handbook

The Open Science Training Handbook

- Idea: bring experienced Open Science trainers together to write a book
- Organisation of Book Sprint in February 2018, Germany

- August 2017: Call for applications (39 applications)

- Selection based on:
  - Open Science expertise, training experience, scientific background & motivation
  - balance of gender, region, disciplines & expertise

14 experts invited as authors

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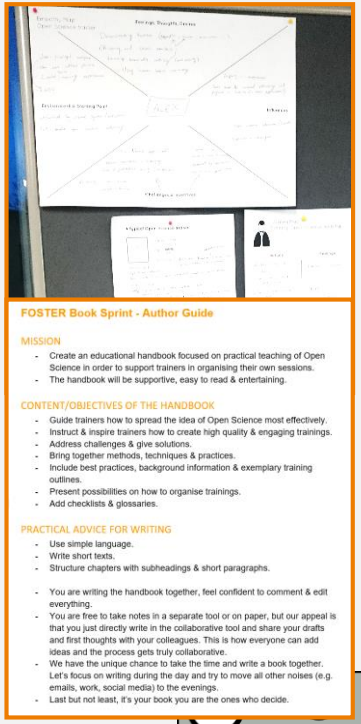
The Open Science Training Handbook

- Guide on how to forward knowledge on Open Science

- Book Sprint format
  - ensured a finished book in only a few days
  - FOSTER provided writing environment (room, food, tools, moderation, author guide, methods etc.)



FOSTER Book Sprint - Author Guide

MISSION

- Create an educational handbook focused on practical teaching of Open Science in order to support trainers in organising their own sessions.
- The handbook will be supportive, easy to read & entertaining.

CONTENT/OBJECTIVES OF THE HANDBOOK

- Guide trainers how to spread the idea of Open Science most effectively.
- Instruct & inspire trainers how to create high quality & engaging trainings.
- Address challenges & give solutions.
- Bring together methods, techniques & practices.
- Include best practices, background information & exemplary training outlines.
- Present possibilities on how to organise trainings.
- Add checklists & glossaries.

PRACTICAL ADVICE FOR WRITING

- Use simple language.
- Write short texts.
- Structure chapters with subheadings & short paragraphs.

- You are writing the handbook together, feel confident to comment & edit everything.
- You are free to take notes in a separate tool or on paper, but our appeal is that you just directly write in the collaborative tool and share your drafts and first thoughts with your colleagues. This is how everyone can add ideas and the process gets truly collaborative.
- We have the unique chance to take the time and write a book together. Let's focus on writing during the day and try to move all other noises (e.g. emails, work, social media) to the evenings.
- Last but not least, it's your book you are the ones who decide.

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BY

The Open Science Training Handbook

- Authors brought
  - time, knowledge, experience, writing skills, motivation & endurance with them

- Within five days: a book of 200 pages was written

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The Open Science Training Handbook

Roadmap

- **Writing** the OSTH - Feb. 2018
- **Pre-release** available for comments & suggestions – Feb. 2018
- Discussing & including suggestions by community - March 2018
- Moving the OSTH to Github
- Finalizing everything for version 1.0
- **Release of OSTH 1.0 as Gitbook** - April 2018

- Now:
  - Living handbook open for contributions
  - Complementing the OSTH with webinars

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OSTH - Structure

- Introduction
- Open Science Basics
  - Open Concepts & Principles
  - Open Research Data & Materials
  - Open Research Software & Open Source
  - Reproducible Research & Data Analysis
  - Open Access to Published Research Results
  - Open Licensing & File Formats
  - Collaborative Platforms
  - Open Peer Review, Metrics & Evaluation
  - Open Science Policies
  - Citizen Science
  - Open Education Resources
  - Open Advocacy
- On Learning & Training
- Organizational Aspects
- Examples & Practical Guidance
- Glossary
- References
- About the Authors & Facilitators

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Open Science Training Handbook

Open Science Basics

- What is it?
- Rationale
- Learning objectives
- Key components: Knowledge & skills
- Questions, obstacles, & common misconceptions
- Learning outcomes
- Further reading

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Open Science Training Handbook

On Learning and Training

- Training vs. teaching
- Strategies
- Expectations
- Target audiences
- Motivations
- Practical Guidance
- Designing a course
- Advice for before, during and after the training
- Further reading

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Open Science Training Handbook

Organizational aspects

- Training format
- Audience, guest speakers, and partners
- Venue
- Timing
- Budget
- Equipment & media
- Marketing & advertising strategy
- Registration
- Communication
- Catering

- Code of conduct
- Certification of attendance
- Signs
- Social Media & notes
- Event closure
  - Venue
  - Debrief
  - Evaluation
  - Dissemination
- Check list

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Open Science Training Handbook

Examples & Practical Guidance

- Example training structures
- Types of exercises
- 24 example exercises:
  - Format, time needed
  - Topic
  - Learning objectives
  - Exercise description
  - Materials and tools needed
  - Level of prior knowledge needed
  - Things to bear in mind
  - How to adapt for other purposes

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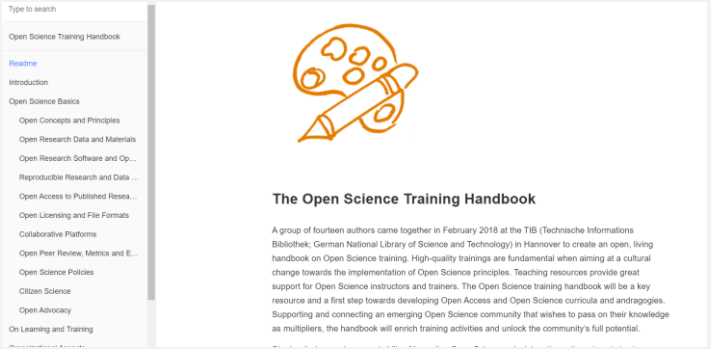
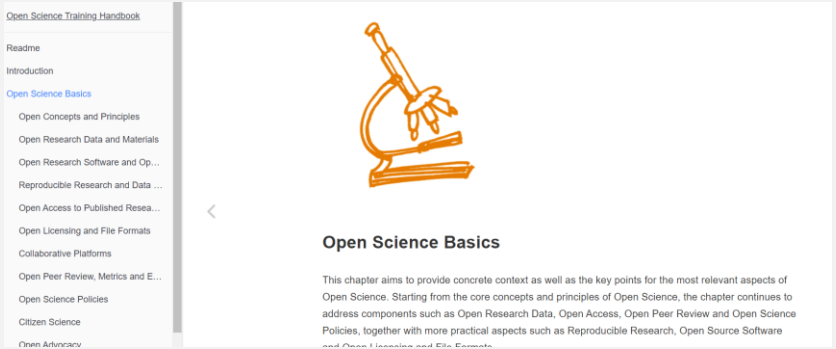
Open Science Training Handbook

- Now available as GitBook
- CC 0 license to enable simple re-use





book.fosteropenscience.eu

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Contibute and cite the OSTH

- Contribute via Github (e.g. example exercises, translations)
- Please consider citing the handbook refering to

  www.book.fosteropenscience.eu

  - https://doi.org/10.5281/zenodo.1212496, a citable DOI for an archived dump of the book

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Thanks!

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